

11 March 1996

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NTC SAN DIEGO
SSIC #5090.3

**Technical Review of Working Drafts for
Focused Site Inspection Report for Sites 5 and 6 - CTO-0046
Naval Training Center, San Diego, California**

GENERAL COMMENTS:

Written on 26 February 1996
From Southwest Division Environmental Office
Received unofficially on 26 February 1996

SPECIFIC COMMENTS:

COMMENT 1: In Section 6.1, the text states that "the location of TPH and pesticides reported above detection limits in soil sample are identified on Figure 6-1." Later, in Section 6.1.3, the text states "petroleum hydrocarbons, analyzed by immunoassay, were not detected in any of the soil samples collected at Site 6." When Table 6-1 is reviewed, it is clear that at BK-05 and ST-31 there were detectable limits (though not approaching remediation threshold levels).

RESPONSE 1: Referring to Table 6-3, petroleum hydrocarbons using the immunoassay technique (PH-d) were not detected in any of the samples. Table 6-1 shows results of total petroleum hydrocarbons analyzed by EPA Method 8015-Modified, which were reported above the detection limits in samples BK-05 and ST-31. The distinction has been clarified in the text and tables.

COMMENT 2: In the conclusion (Section 8.1), the text cites no TPH groundwater contamination but does not mention soil sample contamination levels (yet this is extensively covered for arsenic and heavy metals).

RESPONSE 2: Soil sample contamination levels for TPH have been added to the conclusions.

GENERAL COMMENTS:

Written on 22 February 1996
From Content P. Arnold
Received unofficially on 27 February 1996

While reviewing the documents it was noted that this is a "Working Draft," thus comments were focused on overall content. However, some comments still address minor formatting and grammatical issues. Overall, quality of the document at this stage of "Working Draft" is good. The following comments relate to the aforementioned documents. Sites 5 and 6 documents:

COMMENT A: QA all tables for formatting, precision, and accuracy of information.

RESPONSE A: All tables have been checked for formatting and data accuracy, and any inconsistencies or errors have been corrected.

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COMMENT B: Section 7; overall section is hard to review because it's very general and makes reference to an Appendix that I don't have.

RESPONSE B: Comment Noted.

COMMENT C: Conclusions and Recommendations; the sampling objectives of the Work Plan were as follows:

- to gather information to support a decision regarding the need for further action,
- to demonstrate the occurrence of a release,
- identify hazardous substances present at the site, and
- identify potentially exposed targets.

RESPONSE C: The conclusions have been modified as appropriate to address the sampling objectives of the FSI. A section has been added to the conclusions that identifies and briefly discusses potentially exposed targets. The format of the conclusions section has been made consistent between the reports for both sites.

The conclusion section seems somewhat brief. Please make sure all items are addressed in text. In addition, this section is broken up differently in each document. We need to remain consistent in format.

COMMENT D: Once again, the arsenic issue has come up. We need to be thinking about how the regulators are going to view the metals argument. More discussion needed on this issue.

RESPONSE D: Comment noted. As discussed in the meeting on Thursday, February 29, we agree that more discussion on background is needed. In addition, Sections 8.1.1 and 8.1.3 have been revised to indicate that the arsenic concentrations found at Site 6 are relatively low and similar to concentrations found in other San Diego areas. Arsenic concentrations from two other nearby sites are referenced.

SITE 5, COMMENT a: Page ii, third paragraph, last sentence does not make grammatical sense.

RESPONSE a: The sentence has been re-written.

COMMENT b: Page 4-2, Section 4.3, is specified criteria from the SAM manual or state policy?

RESPONSE b: The specified criteria were taken from the U.S. EPA residential preliminary remediation goals (PRGs) and the California Enclosed Bays and Estuaries Plan. In addition, some of the criteria were developed specifically for the FSI, as noted in the Work Plan. The sources of the criteria

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have been clarified in the text and on the tables.

COMMENT c: Page 4-2, Table 4-1, check table for formatting.

RESPONSE c: The table has been checked for proper formatting, and changes made as necessary.

COMMENT d: Page 5-6, Section 5.3.1, fourth paragraph on page, elaborate on rationale and methodology for FCR. Regulators and RAB will be concerned with why this was a good technical decision.

RESPONSE d: Due to tidal influences on groundwater and difficulty in identifying a distinct capillary fringe, the capillary fringe was interpreted to be minimal. Therefore, it was not considered practical or necessary to collect two samples. This additional explanation has been added to the FSI

COMMENT e: Page 6-1, Section 6.1, geophysical results were of much importance to regulators (i.e., Corey Walsh). Elaboration of results would be beneficial, perhaps a table.

RESPONSE e: Additional brief explanations were added to the text that define anomalies and further describe the results.

COMMENT f: Table 6-1, provide explanation of the "J" notation in table.

RESPONSE f: The "J" qualifier denoting an estimated value could be due to any number of factors which can vary between individual samples. For example, these factors could include out-of criteria matrix spike or surrogate compound recoveries, or initial or continuing calibrations that fell outside of method specified criteria. The validation summary sheets (refer to the response to comment j) will allow for evaluating the specific reasons for the assignment of any particular "J" qualifier. The summary sheets are presented in Appendix D. This explanation has been noted on the table.

COMMENT g: Table 6-3, check formatting.

RESPONSE g: The table has been checked for proper formatting, and changes made as necessary.

COMMENT h: Page 7-2, Section 7.2.2 (comment refers to both documents) Include name of independent subcontractor.

RESPONSE h: The name of the independent subcontractor, Laboratory Data Consultants, has been added.

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COMMENT i: Page 7-3, Section 7.2.3 (comment refers to both documents).
Section too general. Further explanation of R qualifier is needed.

RESPONSE i: Data assigned an "R" qualifier indicates that the data was rejected and is considered unusable, which could be due to any number of factors. For example, these factors could include gross non-compliance with calibration criteria, or unacceptably low spike or surrogate compound recoveries. Additional explanation of the R qualifier has been provided, including reference to the data validation summary sheets.

COMMENT j: Page 7-3, Section 7.3 (comment refers to both documents).
Will final validated data summary sheets be included in final?

RESPONSE j: Final validated data summary sheets have been included in the FSI for sites 5 and 6.

SITE 6, COMMENT a: Summary page I, paragraph 2, the PA was very specific in indicating evidence of a suspected release at Site 6. As stated in the Work Plan page 1-13, "Previous studies conducted at NTC reported that residual amounts of pesticides were disposed into soil adjacent to Building 516. Additionally, soil staining from petroleum based substance was observed at two areas near the shop. Consequently, further action is recommended for Site 6." I think that it is important to mention this because RAB and regulators will notice the deviation and we don't want to appear as though we are covering information up.

RESPONSE a: The results of the previous studies, as stated in the comment, have been added to the summary.

COMMENT b: Section 2.1.1, page 2-1, third paragraph, second sentence addresses equipment stored at the golf course maintenance shop. Are pesticides stored on premises? The next paragraph and Table 2-1 summarizes hazardous substances used at the site. Are these substances also stored there?

RESPONSE b: According to the authorized use list for building 516, dated June 1994, one fungicide and one fertilizer, along with some other chemicals, are authorized for storage and use at the golf course maintenance shop. The Table currently lists substances that were stored and/or used at the site in 1983. The table has been updated to also include the chemicals from the authorized use list.

COMMENT c: Fourth paragraph, third sentence is a definite statement, while other text regarding washout procedures uses not so definite language (i.e., "suggests", "maybe"). See first sentence same paragraph, also third sentence top of page 2-6.

RESPONSE c: The referenced sentence has been modified to state: "In addition, the IAS suggested that washout was generally poured..."

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COMMENT d: Section 4.1.2., page 4-1, first paragraph, last page. Might want to refresh the reader's memory as to why the samples obtained from the 5.0 and 10.0 depths were achieved (reference Work Plan page A4-1, Section 4.1). Chart summarizing sampling depths and analytical methods might be helpful.

RESPONSE d: The referenced wording from the Work Plan has been added to the FSI.

COMMENT e: Page 4-2, Table 4-1. The Specific Criteria (soil and water) for 4,4 'DDD, 4,4' DDE, 4,4' DDT is from U.S. EPA Preliminary Remediation Goals and not from the SAM manual. In addition, it is worthy to note that the water criteria is Tap Water criteria, keep in mind that the groundwater at NTC has no beneficial uses. Also, a note should be supplied referencing where water specified criteria came from.

RESPONSE e: The table has been corrected as stated in the comment to include the proper criteria references.

COMMENT f: Page 4-3, Table 4-2. To remain consistent with Table 4-1, fourth column should be titled Soil Specified Criteria.

RESPONSE f: The designation "specified criteria" has been changed to "threshold limits" throughout the FSI. The tables have been checked for consistency

COMMENT g: Page 4-5, Section 4.3. It is my understanding that the specified criteria didn't come from the SAM manual.

RESPONSE g: The specified criteria were taken from the U.S. EPA residential preliminary remediation goals (PRGs). In addition, some of the criteria were developed specifically for the FSI, as noted in the Work Plan. The sources of the criteria have been clarified in the text and on the tables.

COMMENT h: Page 6-1, Section 6.1.3. Check text with chart for consistency. Also use "BK-05" notation in text to remain consistent with chart (some problem: Figure 5-1 and page 7-6, Section 7.4.1.4).

RESPONSE h: All notations of BK-5 in the text, tables, and figures have been changed to BK-05.

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COMMENT i: Page 6-2, Table 6-1. Add TPH to notes below.

RESPONSE i: The TPH explanation has been added to the notes.

COMMENT j: Page 8-1, Section 8.1, first paragraph last sentence. Sentence doesn't make sense.

RESPONSE j: The sentence has been clarified.

GENERAL COMMENTS:

Written on 21 February 1996

From Janet A. Corbett

Received unofficially on 27 February 1996

General impression: overall content is adequate, document is substantially complete and document quality is good.

COMMENT a: The Focused Site Inspection (FSI) reports for Sites 5 and 6 at Naval Training Center have been reviewed and contain adequate information to make the conclusions/recommendations for each site. Since this is a working document, comments have been made on format, typographical or grammatical errors.

RESPONSE a: Comment noted.

COMMENT b: The Summary and Introduction of each report should clearly state the purpose of the FSI. As indicated in reference (c), the goal of the focused SI is to obtain and analyze environmental samples, to investigate human and environmental exposure to hazardous substances and to test PA hypotheses that are the basis of the further action conclusion.

RESPONSE b: The general goal of the FSI as stated in the comment has been added to the summary and introduction sections.

COMMENT c: Please see reference (c) pages 110-113 for the format of the

RESPONSE c: Based on the results of the preliminary assessment, surface

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report. Although the documents reviewed contain most of the necessary information, the reports do not clearly address the sections on surface water and air pathways.

water and air pathways were not evaluated for the FSI. Discussion of surface water and air pathways and why they were not evaluated have been added to the FSI in the introduction, background, and conclusions sections.

SPECIFIC COMMENTS FOR SITE 5:

COMMENT a: Please clarify if we were concerned with the surface water and air pathways. This page talks about soil and/or groundwater but page 2-10 talks about soil and/or surface water.

RESPONSE a: Refer to the response to comment c, general comments. Since the FSI directly evaluated only soil and groundwater, page 2-10 has been modified appropriately.

COMMENT b: Page 2-1, Section 2.1, Since all of the contaminants found on this site are petroleums have we investigated the possibility of invoking the petroleum exclusion. Would using this exclusion provide the navy any benefits to clean up the site? Please investigate.

RESPONSE b: As discussed in the meeting on Thursday, February 29, invoking the petroleum exclusion will shift oversight from CERCLA to state and /or local agencies (RWQCB and/or San Diego County DEH), and may or may not be to the Navy's advantage. This issue will remain open for discussion and consideration in the future.

COMMENT c: Page 4-1, Section 4.1.1, A global issue is the determination of background for this site. The team should address this issue soon.

RESPONSE c: Metals were not analyzed for this site, and background is therefore not currently an issue. However, we agree that background for NTC in general should be discussed as a global issue.

COMMENT d: Table 4-1, PH-d (soil) should have a "g" superscript in the table. Please clarify how the soil specified criteria of 1,000 mg/kg was determined. Please clarify how the water specified criteria of 500 µg/L was determined.

RESPONSE d: The correction in the table has been made. The threshold limits for TPH, TRPH, and PH-d (Table 4-1) were developed specifically for the FSI since there are no PRGs or California Enclosed Bays and Estuaries criteria for these analytes. In addition, as agreed in the meeting on Thursday, February 29, the 1,000 mg/kg threshold limit will be used for soils analyzed by EPA Method 8015-Modified. The TPH, TRPH, and PH-d threshold limits are similar to the limits typically defined by the County of San Diego, Department of Health Services for petroleum hydrocarbon-impacted sites. This has been clarified in the FSI.

COMMENT e: Table 4-2, the soil specified criteria should be checked. My

RESPONSE e: As discussed in the meeting on Thursday, February 29, the

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PRG chart (September 1995) indicates that the PRG for toluene is 690 mg/kg and xylene is 990 mg/kg. Please clarify where the water specified criteria were derived from. My PRG chart indicates that benzene is .39 ppb, ethylbenzene is 1,300 ppb, toluene is 720 ppb and xylene is 1,400 ppb. Are the values listed obtained from the Enclosed Bays and Estuaries Plan? Footnote (a) should indicate that these PRGs represent the residential scenario.

criteria from the February 1995 PRG update, which are the criteria specified in the Work Plan, have been used for the FSI. The criteria have been checked for accuracy and changed if incorrect, and the footnotes have been modified as necessary to clarify the source(s) of the criteria.

COMMENT f: Page 5-5, Section 5.3.1, see Comment c.

RESPONSE f: Refer to the response to comment c.

COMMENT g: Page 6-2, Section 6.3, the table referred to should be Table 6-3.

RESPONSE g: The correction has been made.

COMMENT h: Table 6-2, any ideas on ST-01 where the immunoassay kit shows results between 100 and 500 mg/kg while the fixed lab results are less than 1.2 mg/kg?

RESPONSE h: The results of the immunoassay are generally comparable with the fixed lab results, with the exception of sample ST-01. The results of the analyses for ST-01 were re-examined, and no reason for the apparent discrepancy could be identified.

COMMENT i: Table 6-4, ethylbenzene specified criteria should be 690 mg/kg. Xylenes specified criteria should be 990 mg/kg.

RESPONSE i: Refer to the response to comment e.

COMMENT j: Table 8-1, Section 8.1.4, the last sentence is incomplete.

RESPONSE j: The sentence has been corrected.

COMMENT k: Page 9-1, Section 9: Reference (c) should be included in this section.

RESPONSE k: The reference has been added.

SPECIFIC COMMENTS FOR SITE 6:

COMMENT a: Page I, as a team, discussions will be needed on background

RESPONSE a: Comment noted. In addition, an expanded discussion of

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issues for Sites 5 and 6.

background as it pertains to arsenic has been added to the conclusions for Site 6. This discussion includes reference to other Navy sites in the San Diego area, as agreed upon in the Thursday, February 29 meeting.

COMMENT b: Page 1-1, Section 1, third paragraph does not discuss concerns to the surface water and air pathways. Please clarify.

RESPONSE b: Refer to the response to comment c, general comments. The concerns regarding the surface and air pathways have been clarified.

COMMENT c: Page 2-5, Table 2-1, please clarify the purpose of this table. The sources indicates it is from the Naval Administration Command 1983. I'm not clear what that has to do with the current hazardous substances used at the golf Course Maintenance shop. The chart seems outdated. Recommend using a current list such as the authorized use list which should be developed for each shop.

RESPONSE c: The purpose of the table is to list the substances stored and/or used at Site 6. We have obtained an authorized use list from the Navy, dated June 1994, which shows chemicals authorized for storage and use at the golf course maintenance shop. The table has been updated to include the chemicals on the authorized use list.

COMMENT d: Page 2-6, Section 2.2.2, please clarify or provide examples of the "repositories" referred to in the third sentence. Do we have names of the people interviewed and dates of the site reconnaissance performed?

RESPONSE d: The reference to repositories will be removed, since review of the preliminary assessment (PA) indicates that the majority of the resources/documents that were researched were from the Navy. The exceptions are some photos reviewed at the Aerial Fotobank, and local, state, and federal agency spill response records. Table 1-1 in the PA presents the names of the 8 people that were interviewed (7 of which are Navy personnel). The site reconnaissance was performed in August 1994. Since the resources researched for the PA are extensive, and the intention of Section 2.2.2 is to provide a brief summary of the results, further details were not provided in the FSI.

COMMENT e: Page 4-1, Section 4, see Comment b.

RESPONSE e: Refer to the response to comment c, general comments.

COMMENT f: Page 4-1, Section 4.1.1, see Comment a.

RESPONSE f: Refer to the response to comment a.

COMMENT g: Page 4-2, Table 4-1, the soil criteria and the water specified

RESPONSE g: The criteria for DDD, DDE, and DDT are from the February

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criteria for DDD, DDE, and DDT are residential PRGs from the September 1995 memo. This should be clearly footnoted in the notes. The soil specified criteria for TPH, PH-d and TRPH should be clearly footnoted. The water specified criteria for TRPH does not have a footnote in the note section.

COMMENT h: Page 4-3, Table 4-2, please check the soil method specified criteria for ethylbenzene (690 mg/kg), 1,1,1-trichloroethane (3,000 mg/kg) and xylene (990 mg/kg). The numbers in parentheses are from the September 1995 PRG list. Note (b) should indicate that these PRGs are for the soil residential scenario.

COMMENT i: Page 4-4, Table 4-3, Note (b) should indicate that these PRGs are for the residential scenario.

COMMENT j: Page 4-5, Section 4.3, see Comment i.

COMMENT k: Page 6-1, Section 6.1.4, see Comment a.

COMMENT l: Page 6-6, Section 6.3, please clarify why the specified criteria for arsenic is 2.0 mg/kg. The September 1996 PRG list indicates that arsenic-noncancer is 2.2 mg/kg and arsenic-cancer is 3.8 mg/kg.

COMMENT m: page 6-7, table 6-4, 1995 PRG for Heptachlor Epoxide is .049 mg/kg for residential scenario.

COMMENT n: Page 6-7, Table 6-5, please clarify how the specified criteria for arsenic was determined. Usually in the site screening phase, SWDIV policy

1995 residential PRGs. The criteria for TPH, PH-d, and TRPH were developed specifically for the FSI. Footnotes have been added and/or modified to clarify the sources of the criteria.

RESPONSE h: The criteria are from the February 1995 residential PRGs, which has been noted in the footnotes. The residential scenario has also been indicated in the footnotes.

RESPONSE i: The residential scenario has been indicated in the footnotes.

RESPONSE j: The residential scenario has been indicated in the text.

RESPONSE k: Refer to the response to comment a.

RESPONSE l: From the February 1995 residential PRGs (refer to the response to comment e, specific comments for Site 5), the arsenic-noncancer PRG is 22 mg/kg, and the arsenic-cancer PRG is 0.32 mg/kg. The table has been corrected to include the arsenic-cancer PRG of 0.32 mg/kg.

RESPONSE m: The correction has been made in the table.

RESPONSE n: The CAL-modified PRG has been used in the table.

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is to use the CAL-modified PRG for lead of 130 ppm.

COMMENT o: Page 9-1, Section 9, Reference (c) should be included in this section.

RESPONSE o: The noted reference has been included.

RECOMMENDATIONS: Address/incorporate comments.